

**City University of Hong Kong
Course Syllabus**

**offered by Department of Information Systems
with effect from Semester A 2017 / 2018**

Part I Course Overview

Course Title:	<u>Management Support and Business Intelligence Systems</u>
Course Code:	<u>IS5740</u>
Course Duration:	<u>One Semester (13 weeks)</u>
Credit Units:	<u>3</u>
Level:	<u>P5</u>
Medium of Instruction:	<u>English</u>
Medium of Assessment:	<u>English</u>
Prerequisites: <i>(Course Code and Title)</i>	<u>Nil</u>
Precursors: <i>(Course Code and Title)</i>	<u>Nil</u>
Equivalent Courses: <i>(Course Code and Title)</i>	<u>Nil</u>
Exclusive Courses: <i>(Course Code and Title)</i>	<u>Nil</u>

Part II Course Details

1. Abstract

This elective course aims to introduce emerging as well as popular analytical concepts and information technologies suitable for management support with business intelligence.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	Recognize the need for management support and business intelligence requirements beyond typical Management Information Systems.	20%	✓		
2.	Acquire and critically apply analytical concepts and skills of management support and business intelligence.	30%	✓		
3.	Differentiate between various information technologies for management support and business intelligence that enable quantitative and non-quantitative analysis.	20%	✓	✓	
4.	Formulate and critically analyze the requirements for management support, and identify appropriate tools and techniques required for implementation of business intelligence systems.	10%	✓	✓	
5.	Creatively develop effective solutions to real management support and business intelligence problems.	20%	✓	✓	✓
		100%			

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

Seminar : 26 hours

Laboratory : 13 hours

TLA	Brief Description	CILO No.					Hours/week (if applicable)
		1	2	3	4	5	
TLA1: Seminar	Concepts and applications of information technology in the context of decision making and problem solving for Management support are explained by instructor. Exercises and case studies also are introduced to students for interactive learning in the seminars.	✓	✓	✓			
TLA2: Demonstration	Demonstrations of representative technologies and their application to address business problems are given. Course participants		✓	✓	✓	✓	

	critically analyze requirements for management support, and identify appropriate tools and techniques required.						
TLA3: Practical	Development of hands-on skills for solving real-life business problems analytically and with appropriate technologies of management support and business intelligence is carried out.		✓	✓	✓	✓	
TLA4: Case Analysis	Students will be required to relate to the content of their own workplace or other relevant organizational environment, the relevance of the various business intelligence and management support solutions. Results will be discussed and presented to fellow students.	✓		✓	✓		
TLA5: On-Line Discussion	Students will use online media such as discussion forums, weblogs, or wikis to self-reflect on their learning and share their insights with classmates.	✓	✓	✓	✓	✓	

4. Assessment Tasks/Activities (ATs)
(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.					Weighting	Remarks
	1	2	3	4	5		
Continuous Assessment: 60%							
<u>AT1. Seminar, Laboratory Exercises, Participation, and Online Discussion</u> Each seminar and laboratory consists of exercises, small group discussions, self-reflection, or student presentations to assess students' understanding of the chosen topics and their abilities to apply their skills. It also includes online comments with which students report key learning, self-reflection, and related concepts found online.	✓	✓	✓	✓		20%	
<u>AT2. Individual Assignment</u> An individual assignment which lets students analyze a business problem and develop an analytical of implemented solution.			✓	✓	✓	10%	
<u>AT3. Group Project</u> A group project, which includes a project report and presentation, will be allocated to let students apply Management Support and Business Intelligence concepts and technologies to solve business problems.	✓	✓	✓	✓	✓	30%	
Examination: 40% (duration: one 2-hour exam)							
<u>AT4. Examination</u> A written examination is developed to assess student's competence level of the taught subjects.	✓	✓	✓	✓		40%	
						100%	

Note: Students must pass BOTH coursework and examination in order to get an overall pass in this course.

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
AT1. Seminar, Laboratory Exercises, Participation, and Online Discussion	Ability to accurately describe key concepts of management support and business intelligence and differentiate against typical management information system; and explain the need for management support and business intelligence requirements beyond typical Management Information Systems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to explain how the analytics underlying management support and business intelligence generate better business information and help solve business problems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to differentiate between various information technologies for management support and business intelligence that enable quantitative and non-quantitative analysis; and compare and contrast technology characteristics and corresponding capabilities.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to formulate and critically analyze the requirements for management support, and identify appropriate tools and techniques required for implementation of business intelligence systems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT2. Individual Assignment	Ability to differentiate between various information technologies for management support and business intelligence that enable quantitative and non-quantitative analysis; and compare and contrast technology characteristics and corresponding capabilities.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to formulate and critically analyze the requirements for management support, and identify appropriate tools and techniques required for implementation of business intelligence systems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to creatively develop effective solutions to real management support and business intelligence problems.	High	Significant	Moderate	Basic	Not even reaching marginal levels

AT3. Group Project	Ability to accurately describe key concepts of management support and business intelligence and differentiate against typical management information system; and explain the need for management support and business intelligence requirements beyond typical Management Information Systems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to explain how the analytics underlying management support and business intelligence generate better business information and help solve business problems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to differentiate between various information technologies for management support and business intelligence that enable quantitative and non-quantitative analysis; and compare and contrast technology characteristics and corresponding capabilities.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to formulate and critically analyze the requirements for management support, identify appropriate tools and techniques required for implementation of business intelligence systems, and conduct in-depth analysis.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to creatively develop effective solutions to real management support and business intelligence problems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT4. Examination	Ability to accurately describe key concepts of management support and business intelligence and differentiate against typical management information system; and explain the need for management support and business intelligence requirements beyond typical Management Information Systems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to explain how the analytics underlying management support and business intelligence generate better business information and help solve business problems.	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to differentiate between various information technologies for management support and business intelligence that enable quantitative and non-quantitative analysis; and	High	Significant	Moderate	Basic	Not even reaching marginal levels

	compare and contrast technology characteristics and corresponding capabilities.					
	Ability to formulate and critically analyze the requirements for management support, identify appropriate tools and techniques required for implementation of business intelligence systems, and conduct required analysis.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

1. Introduction to Management Support and Business Intelligence Systems – managerial decision making; role of decision support systems, expert systems, online analytic processing, data warehouses, data mining, and related technologies in decision making; developing business intelligence strategies and execution plans.
2. Principles of decision making and problem solving: intelligence-design-choice; decision making under uncertainty; multi-attribute decision making; optimization, satisficing; goal seeking; simulation.
3. Traditional management support technologies and their Web-based extensions – DSS, Group DSS, Organizational DSS, Expert Systems, Executive Information Systems.
4. Data warehousing, data mining and data visualization - Data warehouses and data marts, OLAP, data visualization and multidimensionality, intelligent databases and data mining.
5. Non-quantitative methods and technologies for management support and business intelligence – knowledge management, neural computing, intelligent agents and hybrid intelligent systems.

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Nil
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2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1.	Galit Shmueli, Nitin Patel and Peter Bruce, <u>Data Mining for Business Intelligence: Concepts, Techniques, and Applications in Microsoft Office Excel with XLMiner</u> , 2nd edition, Wiley. ISBN-10: 0470526823, ISBN-13: 978-0470526828
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- Updated SYL template in July 2017.